PATENT

DOCKET NO.: CARP-0123/P035760US/HGH

Application No.: 10/579,981

Office Action Dated: September 14, 2007

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

- 1. (Currently amended) A transformed host cell comprising
 - a chromosomal gene which inhibits cell growth <u>operably linked to a regulatory</u> sequence; and
 - ii) a plasmid <u>comprising an origin of replication</u> encoding an antisense sequence which binds to mRNA transcribed from the regulatory sequence.

wherein the binding of the antisense sequence encoded by the origin of replication of the plasmid to mRNA transcribed from the regulatory sequence inhibits the action of the chromosomal gene, thereby permitting cell growth.

- (Original) A transformed host cell according to claim 1 wherein the plasmid comprises a cloning site for insertion of a gene of interest.
- (Previously presented) A transformed host cell according to claim 2, wherein the plasmid further comprises a gene of interest.

4.-9. (Canceled)

- 10. (Currently amended) A transformed host cell according to elaim 9 claim 1, wherein the antisense sequence encoded by the plasmid is RNAI or a portion thereof and the regulatory sequence operatively linked to the chromosomal gene encodes RNAII or a portion thereof.
- 11. (Currently amended) A transformed host cell according to elaim 9 claim 1, wherein the antisense sequence encoded by the plasmid is RNAII or a portion thereof and the regulatory sequence operatively linked to the chromosomal gene encodes RNAI or a portion thereof.

(Canceled)

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 (Previously presented) A transformed host cell according to claim 1, wherein the cell is in culture in vitro.

 (Previously presented) A transformed host cell according to claim 1 which is a prokaryotic cell.

(Previously presented) A transformed host cell according to claim 14 which is a bacterial

 (Previously presented) A transformed host cell according to claim 15, wherein the cell is a gram negative bacterial cell.

 (Previously presented) A transformed host cell according to claim 16, wherein the cell is an E. coli cell or a Salmonella cell.

 (Previously presented) A transformed host cell according to claim 15, wherein the cell is a gram positive bacterial cell.

 (Previously presented) A transformed host cell according to claim 18, wherein the cell is a Bacillus cell.

20. (Previously presented) A transformed host cell according to claim 15 which is an attenuated cell.

 (Previously presented) A transformed host cell according to claim 1 wherein the cell is a eukaryotic cell.

 (Previously presented) A transformed host cell according to claim 21 wherein the cell is a fungi.

23. (Original) A transformed host cell according to claim 21, wherein the cell is a plant cell.

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24. (Previously presented) A transformed host cell according to claim 21 wherein the cell is

an animal cell.

25. (Previously presented) A transformed host cell according to claim 1, wherein the

chromosomal gene is a toxin gene.

26. (Previously presented) A transformed host cell according to claim 25, wherein the toxin

gene is sacB.

27. (Previously presented) A transformed host cell according to claim 1, wherein the

chromosomal gene encodes a repressor protein that inhibits expression of a second chromosomal

gene essential for cell growth.

28. (Previously presented) A transformed host cell according to claim 27, wherein the

second chromosomal gene is conditionally essential for cell growth.

29. (Previously presented) A transformed host cell according to claim 27 wherein the

chromosomal gene encodes the repressor lacI and the second chromosomal gene is operatively

linked to a lac operator and promoter.

30. (Previously presented) A transformed host cell according to claim 27 wherein the

chromosomal gene is dapD or fabA.

31. (Previously presented) A transformed host cell according to claim 1, wherein the

chromosomal gene encodes an antisense sequence that inhibits expression of a second

chromosomal gene essential for cell growth.

32. (Previously presented) A transformed host cell according to claim 31, wherein the

antisense sequence encoded by the chromosomal gene inhibits expression of the second

chromosomal gene by binding to the chromosomal gene.

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33. (Previously presented) A transformed host cell according to claim 31, wherein the antisense sequence encoded by the chromosomal gene inhibits expression of the second chromosomal gene by binding to mRNA transcribed from the second chromosomal gene.

- 34. (Previously presented) A transformed host cell according to claim 31 wherein the second chromosomal gene is conditionally essential for cell growth.
- (Previously presented) A transformed host cell according to claim 31, wherein the second chromosomal gene is dapD or fabA.
- 36. (Currently amended) A transformed host cell according to claim 1 wherein the chromosomal gene or the regulatory sequence-chromosomal gene fusion is under the control of a constitutive promoter.
- 37. (Currently amended) A transformed host cell according claim 1 wherein the chromosomal gene or the regulatory sequence-chromosomal gene fusion is under the control of an inducible promoter.
- 38. (Previously presented) A method of maintaining a plasmid in a host cell in vitro comprising the step of culturing a transformed host cell according to claim 1 under conditions sufficient to permit said cell to grow.
- (Previously presented) A method of producing plasmid DNA comprising culturing a transformed host cell according to the method of claim 38 and isolating the plasmid DNA.
- 40. (Previously presented) A method of producing a recombinant protein comprising culturing a transformed host cell comprising a plasmid encoding a protein of interest according to the method of claim 38 and isolating the protein from the cell.
- (Previously presented) A pharmaceutical composition comprising a transformed host cell according to claim 1 together with a pharmaceutically acceptable excipient, diluent or buffer.

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42.-43. (canceled)

44. (Previously presented) A method of delivering a gene to a patient comprising

administering to the patient a transformed host cell according to claim 3.

45. (Previously presented) A method of maintaining a plasmid in a recipient organism

comprising introducing a transformed host cell according to claim 1 into said organism, wherein

said chromosomal gene in said transformed host cell is essential for cell growth in vivo.

46.-71. (Canceled)

72. (Previously presented) A method of immunizing a patient against a disease caused by a

pathogen comprising administering a transformed host cell according to claim 1 to the patient.

73. (Canceled)